

**CITY OF CARLSBAD
CLASS SPECIFICATION**

JOB TITLE: **ENGINEERING TECHNICIAN I
ENGINEERING TECHNICIAN II**

DEPARTMENT: **ENGINEERING**

BASIC FUNCTION:

Under general supervision, to perform sub professional office and field engineering work involved in the planning, design, and construction of public works facilities; to assist other engineering staff in the performance of office and field engineering work; and to do related work as assigned.

DISTINGUISHING CHARACTERISTICS:

Engineering Technician I: This is the entry-level class in the sub professional engineering series. Positions in this class are normally considered to be in a training status and perform a variety of technical engineering related duties requiring technical training and education, but little practical experience. Under the training concept, positions assigned to the Engineering level with the understanding that following successful job performance and personal development, reassignment to the Engineering Technician II class may be expected.

Engineering Technician II: This is the Journey level sub professional class. Positions assigned to this class require technical engineering knowledges, skills and abilities acquired through experience and require the ability to work independently, exercising judgment and initiative while assuming more difficult tasks.

KEY RESPONSIBILITIES:

Serve as a member of a survey crew and operate and employ various types of surveying equipment and instruments.

Assist in the preparation of basic maps and drawings, specifications, and estimates in connection with the construction and maintenance of a variety of engineering projects, including streets, storm drains, sewers, and related public works.

Conduct basic research related to issuance of encroachment permits, preparation of ordinances and resolutions, preparation of deeds and proper descriptions, and related documents.

Inspect materials and workmanship on public works projects to insure conformance with established plans and specifications.

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Prepare property descriptions and parcel maps.

Collect, compile, tabulate and analyze field data; prepare summaries and reports based upon data collected and analyzed.

Sample and test soils, aggregates, and cement.

Make and check notes, maps, drawings, tracings, and engineering computations.

Tabulate and plot field data.

Make traffic counts and collect, organize, tabulate, and analyze a variety of traffic load data.

Review plans and subdivision plans for compliance with code requirements.

Answer questions and provide information to the public concerning engineering.

QUALIFICATIONS:

Engineering Technician I

Knowledge of:

Fundamentals of civil engineering.

Surveying equipment, principles, problems, techniques and practices

Mathematics, including algebra, geometry and trigonometry.

Construction equipment, materials and methods.

Ability to:

Review plans and documents for conformance to regulations.

Gather data and make accurate engineering computations.

Prepare and maintain accurate records and reports.

Understand and interpret engineering records and maps.

Assist in the performance of surveying tasks.

Understand and carry out oral and written directions.

Establish and maintain cooperative relationships with those contacted in the course of work.

EXPERIENCE AND EDUCATION:

Any combination equivalent to experience and education that could likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would include educational training equivalent to completion of the twelfth grade, including or supplemented by courses in drafting, algebra, geometry, and trigonometry and some practical experience.

Engineering Technician II

In addition to the qualifications for Engineering Technician I:

Knowledge of:

Nomenclature, symbols, methods, practices, techniques and instruments used in engineering and mapping.

Methods and equipment used in the testing of construction materials.

Ability to:

Perform routine surveying tasks.

Prepare detailed plans and specifications neatly and accurately.

Independently prepare legal property descriptions.

EXPERIENCE AND EDUCATION:

Two years of increasingly responsible sub professional engineering experience including at least two years at a level comparable to that of Engineering Technician I class.